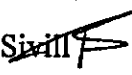


Lockheed Martin Idaho Technologies Company**INTERDEPARTMENTAL COMMUNICATION**

Date: July 26, 1999

To: D. J. Kuhns MS 3920 6-8226

From: T. E. Sivill  MS 3655 6-9273

Subject: WAG 1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE - TES-06-99

Reference: Transmittal to T. S. Green from T. E. Sivill, WAG OU 1-10 RI/FS Remedial Alternatives, TES-3-97, dated September 8, 1997.

Cost Estimating has provided a Planning Cost Estimate for the project referenced above. Costs are summarized in a similar format to the RI/FS estimate for comparison purposes.

Costs are based on information and guidance provided by program personnel. The attached recapitulation sheet outlines the general scope information and identifies the major scope and cost deltas from the FS cost estimate referenced above. Costs have been presented in FY 99 dollars, escalated dollars and discounted to reflect a net present value for comparison purposes.

Should you have any questions, please contact Terry Sivill, ID-TES or 526-9273.

TES

Attachments

cc: B. J. Broomfield MS 3915
T. E. Sivill File
Estimate File 6950-4A 

COST ESTIMATE SUPPORT DATA RECAPITULATION

Project Title: WAG 1 OUI-10 TSF 09/18 TANK SITE DRAFT ROD ESTIMATE
Estimator: TES/KLS
Date: 7-26-99
Estimate Type: PLANNING
File: 6950-4A
Approved By: *MM BOR*

I. **SCOPE OF WORK:** *Brief description of the proposed project.*

Prepare a Rough Order of Magnitude Planning Cost Estimate for the above mentioned project. The estimate focuses on TAN WAG 1 - TSF-09/18 (V-Tanks), Alternative 2A3 Removal/Treatment Onsite and Offsite Disposal Options. This estimate provides an update to the RI/FS Cost Estimate, dated 9/8/97, and incorporates new scoping requirements provided to cost estimating the weeks of 6-17-99 thru 7-20-99.

II. **BASIS OF THE ESTIMATE:** *Drawings, Design Report, Engineers Notes and/or other documentation upon which the estimate is originated.*

The WAG 1 OUI-10 RI/FS REMEDIAL ALTERNATIVES Cost Estimate, dated 9-8-97.

Scoping and assumptions outline provided by the ER project engineer.

Coordination meeting with WAG 1 program management team and governing agencies.

III. **ASSUMPTIONS:** *Conditions statements accepted or supposed true without proof of demonstration. An assumption has a direct impact on total estimated cost.*

The general project assumptions and remedial action alternative general descriptions outlined in the RI/FS estimate still apply. Listed below are the specific assumptions addressing the scoping requirements as currently defined.

Total Capital Costs in current year dollars, (before contingency), reflects a net increase of \$220,758 (*For Onsite Treatment*) and \$3,452,395 (*For Offsite Treatment*). Listed below are the scope/cost deltas:

1. Program Management costs, (*Same For Both Onsite/Offsite Options*), remain the same as stated in the RI/FS.
2. Remedial Action (RA) Documentation, (*Same For Both Onsite/Offsite Options*), (RD/RA SOW and RA Work-plan), Remedial Action Reports, WAG initial 5 year review and RD documentation including the Health and Safety Plan, Sample and Analysis Plan and Pre-final Inspection Report have been revised. Costs are assumed similar to those utilized for the WAG-5 documentation. Costs reflect a net increase of \$219,000. Also included is an activity for initial 5 year review preparation and reviews at a cost of \$141,000.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG 1 OU1-10 SITE V9/18 DRAFT ROD ESTIMATE
File: 6950-4A

Page 2

3. Remedial Design Activities: *(Same For Both Onsite/Offsite Options)*
 - Initial Review of Deed Restrictions has been included as new scope. It is assumed with the new requirements for out-year (100 years) surveillance and monitoring a review of the current deed restrictions will need to be included. Costs are assumed similar to those utilized for the WAG-5 documentation. Costs reflect a net increase of \$32,000.
 - The Title Design construction document package in the RI/FS estimate included design of site preparation, temporary utilities (Primarily electrical power), temporary lay-down and decontamination areas for the remediation subcontractor. The current estimate includes RI/FS estimate items plus the revised scope as listed below:
 - Addition of Remedial Design Work Plan
 - The design scope has not significantly changed, allowances were increased based on a percentage of the total capital cost.
 - Costs reflect a net increase of \$97,340.
4. Remedial Action – Construction Subcontract Activities:
 - Site characterization scope includes additional soil/tank samples. Costs reflect a net increase of \$44,000.
 - The construction/remedial action subcontract *(For Onsite Treatment Option)* includes: site-prep, shoring and piling, secondary containment, utilities, removal of contaminated soils, tank waste, tanks, and piping systems (within the shoring and piling footprint), treatment of tank waste at RWMC/Advanced Mixed Waste Treatment Facility and disposal at WIPP, disposal of soils and piping at the INTEC repository, and tank disposal at the CFA landfill.
Costs reflect a net decrease of (\$133,404).
 - The construction/remedial action subcontract *(For Offsite Treatment Option)* includes: site-prep, shoring and piling, secondary containment, utilities, removal of contaminated soils, tank waste, tanks, and piping systems (within the shoring and piling footprint), packaging of waste in high integrity containers, shipped by truck to an offsite treatment facility (assumed 1,200 miles round trip) and disposal at INEEL INTEC repository, disposal of soils and piping at the INTEC repository, and tank disposal at the CFA landfill.
Costs reflect a net increase of \$423,628.
5. Remedial Action – The Project/Construction Management and RA Operations Oversight Activities:
 - For the above mentioned construction and operations activities project/construction management and operations oversight costs reflect a net decrease of (-\$179,178) *(For Onsite Treatment Option)* and a net decrease of \$69,638 *(For Offsite Treatment Option)*.

COST ESTIMATE SUPPORT DATA RECAPITULATION

- Continued -

Project Title: WAG 1 OU1-10 SITE V9/18 DRAFT ROD ESTIMATE
File: 6950-4A

Page 3

6. Operations assumes added scope including: (*Same For Both Onsite/Offsite Options*)

- Added Program Management for a 100 Year duration. Costs reflect a net increase of \$1,692,000.
- Added 5-year review for a 100 year duration (Previously referred to as Annual Operations and Maintenance Reports). Costs reflect a net increase of \$360,000.
- New caretaker/maintenance of the cap, fencing and monitoring wells for a 100 year duration. Costs reflect a net increase of \$186,250.
- Total Operations Cost in current year dollars, (without contingency), reflects a net increase of \$2,238,250.

IV. **CONTINGENCY GUIDELINE IMPLEMENTATION:** *The percentage used for contingency as determined by the contingency allowance guidelines can be altered to reflect the type of construction and conditions that may impact the total estimated cost.*

Contingency (*For Onsite Treatment Option*) has been included at the same 30% as the RI/FS estimate. Due to the added scope and cost items the 30% factor on the Capital Dollars increased contingency by approximately \$66,227 and Operating Dollars increased by approximately \$671,475.

Contingency (*For Offsite Treatment Option*) has been included at the same 30% as the RI/FS estimate. Due to the added scope and cost items the 30% factor on the Capital Dollars increased contingency by approximately \$226,199 and Operating Dollars increased by approximately \$671,227.

V. **OTHER COMMENTS/CONCERNS SPECIFIC TO THE ESTIMATE**

The estimate has been prepared with less than 5% scope definition.

SUMMARY COST ESTIMATE SHEET

Rev 10-86

Page 1 of 1

Project WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE
WASTE SITE V-8/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

Location TAN - INEEL

Requester D. J. KUHN

Type of Est. PlanningDate 07/26/99Prep'd By TES/KLSFile No. 6950-4AChecked By [Signature]

ACCT. NO.	DESCRIPTION	ALTERNATIVE 2A3					
		EXCAVATE/OFFSITE TREATMENT DISPOSAL					
	CAPITAL COST SUBTOTAL	7,388,320					
	Contingency @ 30%	2,216,496					
	TOTAL CAPITAL COST IN CURRENT YEAR DOLLARS	9,604,816					
	TOTAL CAPITAL COST IN ESCALATED DOLLARS	10,843,612					
	TOTAL CAPITAL COST IN NET PRESENT VALUE	8,676,290					
	O&M COST SUBTOTAL	2,238,250					
	Contingency @ 30%	671,475					
	TOTAL O&M COST IN CURRENT YEAR DOLLARS	2,909,725					
	TOTAL O&M COST IN ESCALATED DOLLARS	19,753,620					
	TOTAL O&M COST IN NET PRESENT VALUE	1,090,942					
	TOTAL PROJECT COST IN CURRENT YEAR DOLLARS	12,514,541					
	TOTAL PROJECT COST IN ESCALATED DOLLARS	30,597,232					
	TOTAL PROJECT COST IN NET PRESENT VALUE	9,787,232					

SUMMARY OF DETAILED COST ESTIMATE

Rev 10-96

Page 1 of 8

Project WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE
WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT
 Location TAN - INEEL
 Requester D. J. KUHN

Type of Est.

PlanningFile No. 4951-4A07/26/99TES/KLS

ACCT. NO.	DESCRIPTION	ALTERNATIVE 2A3	
		EXCAVATE/OFFSITE TREAT DISPOSAL	
ER1220	FFA/CO Management and Oversight		
	Program Management	750,000	
	RA Document Preparation		
	RD/RA SOW	54,000	
	RA Workplan	63,000	
	Packaging, Shipping, Trans. Documentation	48,000	
	Remedial Action Report	48,000	
	WAG-Wide RA - 5 Yr. Reviews	141,000	
	RD Documentation Preparation		
	Safety Analysis Documentation (ASA & HSP)	76,500	
	Sampling and Analysis Plan	54,000	
	Pre-Final Inspection Report	7,500	
ER1210	Remedial Design		
	Added Institutional Controls - 5 Yr. Reviews	32,000	
	Title Design Construction Document Package	182,300	
ER1230	Remedial Action - Construction Subcontract		
	Site Characterization	44,000	
	Construction Subcontract	4,797,933	
	Project/Construction Management	1,090,087	
	TOTAL CAPITAL COST	7,388,320	
ER1230	Remedial Action - Operations (100 Year Duration)		
	Program Management	1,692,000	
	WAG- 5 Yr. Review For 100 Years	360,000	
	Added Institutional Controls - 5 Yr. Review For 100 Years	NA	
	Continued/New Construction Caretaker/Maintenance	188,250	
	Operations, Maintenance, Materials, and Disposal	NA	
ER2000	D&D of Facilities	NA	
ER1310	Surveillance and Monitoring	NA	
	TOTAL OPERATIONS COST (100 YEARS)	2,238,250	

Lockheed Martin Idaho Technologies Co.

Project

WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

TAN - INEEL

D. J. KUHNS

Type of Est.

PLANNING

File No. 6950-4A

Date _____

07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

Type of Est.

PLANNING

File No. 6950-4A

Date 07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

Type of Est.

PLANNING

File No. 6950-4A

Date 07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

Type of Est. PLANNING

File No. 6950-4A

Date 07/26/99[illegible]

Lockheed Martin Idaho Technologies Co.

Page 6 of 8

Project

WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

Type of Est.

PLANNING

File No. 6950-4A

Date 07/26/99[illegible]

Lockheed Martin Idaho Technologies Co.

Project

WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

Type of Est. PLANNING

File No. 6950-4A

Date 07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL TREATMENT

Type of Est. PLANNING

File No. 6950-4A

Date 07/26/99

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SUMMARY COST ESTIMATE SHEET

Rev 10-96

Page 1 of 1

Project WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE
WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT

Location TAN - INEEL

Requester D. J. KUHNS

Type of Est. PlanningDate 07/26/99File No. 6950-4APrep'd By TES/KLSChecked By 

ACCT. NO.	DESCRIPTION	ALTERNATIVE 2A3					
		EXCAVATE/ONSITE TREAT DISPOSAL					
	CAPITAL COST SUBTOTAL	6,721,370					
	Contingency @ 30%	2,016,411					
	TOTAL CAPITAL COST IN CURRENT YEAR DOLLARS	8,737,781					
	TOTAL CAPITAL COST IN ESCALATED DOLLARS	9,698,525					
	TOTAL CAPITAL COST IN NET PRESENT VALUE	7,770,734					
	O&M COST SUBTOTAL	2,238,250					
	Contingency @ 30%	671,475					
	TOTAL O&M COST IN CURRENT YEAR DOLLARS	2,909,725					
	TOTAL O&M COST IN ESCALATED DOLLARS	19,753,620					
	TOTAL O&M COST IN NET PRESENT VALUE	1,090,942					
	TOTAL PROJECT COST IN CURRENT YEAR DOLLARS	8,737,781					
	TOTAL PROJECT COST IN ESCALATED DOLLARS	29,452,145					
	TOTAL PROJECT COST IN NET PRESENT VALUE	8,861,676					

SUMMARY OF DETAILED COST ESTIMATE

Rev 10-98

Page 1 of 8

Project WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE
WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT
 Location TAN - INEEL
 Requester D. J. KUHNS

Type of Est.

PlanningFile No. 6950-4A07/26/99TES/KLS

ACCT. NO.	DESCRIPTION	ALTERNATIVE 2A3 EXCAVATE/TREAT ONSITE DISPOSAL	
ER1220	FFA/CO Management and Oversight		
	Program Management	750,000	
	RA Document Preparation		
	RD/RA SOW	54,000	
	RA Workplan	63,000	
	Packaging, Shipping, Trans. Documentation	48,000	
	Remedial Action Report	48,000	
	WAG-Wide RA - 5 Yr. Reviews	141,000	
	RD Documentation Preparation		
	Safety Analysis Documentation (ASA & HSP)	76,500	
	Sampling and Analysis Plan	54,000	
	Pre-Final Inspection Report	7,500	
ER1210	Remedial Design		
	Added Institutional Controls - 5 Yr. Reviews	32,000	
	Title Design Construction Document Package	182,300	
ER1230	Remedial Action - Construction Subcontract		
	Site Characterization	44,000	
	Construction Subcontract	4,240,591	
	Project/Construction Management	980,479	
	TOTAL CAPITAL COST	6,721,370	
ER1230	Remedial Action - Operations (100 Year Duration)		
	Program Management	1,692,000	
	WAG-Wide RA - 5 Yr. Review For 100 Years	360,000	
	Added Institutional Controls - 5 Yr. Review For 100 Years	NA	
	Continued/New Construction Caretaker/Maintenance	186,250	
	Operations, Maintenance, Materials, and Disposal	NA	
ER2000	D&D of Facilities	NA	
ER1310	Surveillance and Monitoring	NA	
	TOTAL OPERATIONS COST (100 YEARS)	2,238,250	

Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT

D. J. KUHN

File No. 6950-4A

Date 07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT

ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

Type of Est.

PLANNING

File No. 6950-4A

Date 07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT

Type of Est.

PLANNING

File No. 6950-4A

Date _____

07/26/99

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Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT

Type of Est. PLANNINGDate 07/26/99[illegible]

Lockheed Martin Idaho Technologies Co.

Project

WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT

File No. 6950-4A

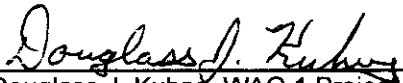
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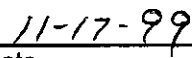
Page 7 of 8

Project WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE
WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT
ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

COSTS ON THIS PAGE ARE THE SAME AS COSTS ON PAGE 7 OF 8 FROM PROJECT "WAG-1 OU 1-10
SITE V9/18 DRAFT ROD COST ESTIMATE; WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL
TREATMENT; ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT



Douglass J. Kuhns, WAG 1 Project Manager

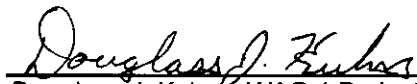


Date

Page 8 of 8

Project WAG-1 OU 1-10 SITE V9/18 DRAFT ROD COST ESTIMATE
WASTE SITE V-9/18 - REMOVAL, EX SITU ONSITE THERMAL TREATMENT
ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT

COSTS ON THIS PAGE ARE THE SAME AS COSTS ON PAGE 8 OF 8 FROM PROJECT "WAG-1 OU 1-10
SITE V9/18 DRAFT ROD COST ESTIMATE; WASTE SITE V-9/18 - REMOVAL, EX SITU OFFSITE THERMAL
TREATMENT; ALTERNATIVE 2A3 - REMOVAL EX SITU THERMAL TREATMENT



Douglass J. Kuhns, WAG 1 Project Manager

11-17-99

Date